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Listing of Claims:

1. (Previously Presented) A device for driving a light source in an image display device, comprising:

input terminals to receive a horizontal synchronization signal and a control signal externally provided; an oscillator to generate a reference signal having a frequency;

a controller to modulate the reference signal in response to the control signal and output a modulated signal;

a voltage supplying unit to apply AC voltage synchronized with the modulated signal to the light source so as to drive the light source; and

a phase difference detecting unit to receive the horizontal synchronization signal and the modulated signal and detect a phase difference between the horizontal synchronization signal and the modulated signal to generate an output signal indicating the phase difference,

wherein the oscillator adjusts the frequency of the reference signal in response to the output signal of the phase difference detecting unit so that the horizontal synchronization signal and the reference signal are synchronized with each other.

2. (Original) The device of claim 1, wherein the control signal externally provided includes a signal to control luminance on a screen of the image display device.

3. (Original) The device of claim 1, wherein the phase difference detecting unit includes:

a phase comparator to compare phases of the horizontal synchronization signal and the modulated signal and generate an output signal of which value is determined based on the comparison; and

an integrator to generate a voltage signal having a magnitude proportional to an integration of the output signal of the phase comparator.

4. (Original) The device of claim 3, wherein the phase comparator includes an XNOR logic gate.

5. (Original) The device of claim 3, wherein the phase comparator includes an XOR logic gate.

6. (Original) The device of claim 3, wherein the integrator includes:

a voltage divider having resistors connected between a supply voltage and ground;

an operational amplifier having an inverting terminal to receive the output signal of the phase comparator and a non-inverting terminal connected to the voltage divider; and

a capacitor connected between the inverting terminal and an output terminal of the operational amplifier.

7. (Original) The device of claim 6, wherein the phase difference detecting unit further includes a reset unit to initiate the integrator in response to an externally provided instruction signal by discharging the capacitor in the integrator.

8. (Original) The device of claim 7, wherein the reset unit includes a switch element connected with the integrator parallel with the capacitor with respect to the operational amplifier, the switch element being controlled by the instruction signal.

9. (Original) The device of claim 1, further including a frequency divider to divide a frequency of the modulated signal provided from the controller to generate a frequency-divided signal.

10. (Original) The device of claim 9, wherein the frequency of the modulated signal is twice a frequency of the frequency-divided signal.

11. (Original) The device of claim 1, further including a low pass filter connected between the phase comparator and the integrator, the low pass filter filtering out high frequency components of the output signal of the phase comparator.

12. (Previously Presented)The device of claim 1, wherein the voltage supplying unit includes a switch circuit to receive the modulated signal from the controller and generate a switch signal having on and off levels by switching a supply voltage in accordance with the modulated signal.

13. (Previously Presented) The device of claim 12, wherein the voltage supplying unit further includes a transformer to receive the switch signal from the switch circuit and generate a sinusoidal signal which is applied to the light source.

14. (Original) The device of claim 13, wherein the sinusoidal signal has amplitudes in positive and negative polarities, respectively, which have a substantially same value.

15. (Original) The device of claim 1, wherein the controller performs pulse width modulation with respect to the reference signal to generate the modulated signal.

16. (Original) The device of claim 1, wherein the light source is driven based on the modulated signal and the image display device is driven based on the horizontal synchronization signal.

17. (Original) A method of driving a light source in an image display device, comprising:

generating a reference signal having a frequency;

detecting a phase difference between a horizontal synchronization signal for the image display device and the reference signal to generate a detect signal;

adjusting the frequency of the reference signal in response to the detect signal; and

providing a driving signal to the light source in response to the adjusted reference signal.

18. (Original) The method of claim 17, wherein the detecting step includes:

comparing the horizontal synchronization signal and the reference signal; and integrating a result signal obtained from the comparing step to generate an integrated voltage signal as the detect signal.

19. (Original) The method of claim 18, further including resetting the integrating step such that the integrated voltage signal returns to an initial status.

20. (Original) The method of claim 18, further including:

performing pulse width modulation with respect to the reference signal to generate a modulated signal; and

dividing a frequency of the modulated signal to generate a frequency-divided signal,

wherein the detect signal is obtained by detecting the phase difference between the horizontal synchronization signal and the frequency-divided signal.

21. (Original) The method of claim 18, further including filtering out high frequency components of the result signal obtained from the comparing step.